U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2005-217-EA

CASEFILE/PROJECT NUMBER:

APDs for well 8506B & well 8505D at location F26 496 - Lease C-64814
Proposed two wells at location D25 496 - Lease C-61136

PROJECT NAME: Story Gulch Unit Exploration

LEGAL DESCRIPTION: T4S, R96W, Sec. 26, SENW
T4S, R96W, Sec. 25, NWNW

APPLICANT: EnCana Oil & Gas (USA) Inc.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action: This environmental assessment (EA) addresses development of two proposed well pad locations in the newly designated Story Gulch Unit (Figure 1). The project area includes the Story Gulch Unit, comprising much of Township 4 South, Ranges 95 and 96 West in Rio Blanco County, and private and public lands along the Sprague Gulch Road from Piceance Creek. Planned facilities include two well pads located on private surface owned by the applicant with two natural gas wells to federal mineral estate on each well pad. The access road to each well pad is the Sprague Gulch Road, on which the applicant was recently granted a right-of-way that authorized use of the road and road improvements for traffic associated with natural gas development (COC-67996) (Figure 2). The impacts of that right-of-way authorization were treated in CO-110-2005-161-EA (July 26, 2005).

The facilities are described below. On-site visits by Encana, BLM and WestWater Engineering specialists were performed on July 8, 2005.

- Well Pad F26 496 – APDs for wells 8506B F26 496 and 8505D F26 496 have been submitted for this well pad, located at T4S, R96W, SENW Sec. 26, near the Divide Road. A new access road, approximately 1500 feet long, would be constructed to the site from the Divide Road, requiring a 50-foot width for construction and 30 feet for long-term use. The pipeline from the well pad would be constructed adjacent to the access road, requiring an additional 50-foot for construction and would tie in to a pipeline to be constructed along the Divide Road.

- Well Pad D25 496 - Two wells are planned for this well pad, located at T4S, R96W, NWNW of Sec. 25, near the intersection of the Sprague Gulch Road and the Divide Road. No APDs have yet been submitted. Since the pad is located adjacent to an existing road, the new access road would only be about 150 feet long. The pipeline from the well pad would be constructed adjacent to the access road and would then follow the Divide Road to the west.

- Divide Road pipeline - A new gathering pipeline would be constructed adjacent to the north side of the Divide Road, from the D25 496 location west past the F26 496 location for about 3¼ miles to an existing line in the SWSW of Section 34, T4S, R96W. The pipeline would create a 60-foot wide disturbance for construction.

With the exception of new road construction to the F25 496 location, all access would be on existing roads. No changes or improvements of those roads are anticipated as part of this project. As described above, the applicant has received a right-of-way grant for use of and improvements to the Sprague Gulch Road. That road would be the primary access route for equipment and vehicles associated with the two well pads and other well pads in the Story Gulch Unit. Natural gas produced from the planned wells would be transported from the Unit in an existing natural gas pipeline.

Total initial disturbance for the well pad locations, associated access roads and pipelines is estimated at 34.1 acres – 10.2 acres for well pads, access roads and tie-in pipelines and 23.9 acres for the Divide Road pipeline. After successful reclamation of the disturbed areas, long-term disturbance is estimated at about three acres.

No Action Alternative: The proposed wells, well pads, access roads, and pipelines would not be constructed.

NEED FOR THE ACTION: All of the proposed or potential actions analyzed in this EA are being pursued by EnCana in order to exercise its federal mineral lease rights.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-5: "Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values."

Decision Language: The proposed action has been reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The action conforms to the decisions/pages of the plan listed above.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below.

All of the activities in the proposed action would occur on private land and no public lands would be involved. As such, the findings with regard to public land health standards are meant only as general indicators of resource condition. They imply no obligation on the part of the private landowner or BLM with regard to the health of the landscape.

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The project area is within a Class II Prevention of Significant Deterioration (PSD) air quality area. The nearest Class I PSD area, the Flat Tops Wilderness Area, is more than 30 miles from the project area.

The principal air quality parameter likely to be affected by construction of well pads, roads, and pipelines is the inhalable particulate level (PM_{10} - particles ten microns or less in diameter) associated with fugitive dust. Although no monitoring data are available for the survey area, it can be surmised that the air quality is good because the Colorado Air Pollution Control Division (APCD) estimates the maximum PM_{10} levels (24-hour average) in rural portions of western Colorado like the Piceance Basin to be less than 50 micrograms per cubic meter. This estimate is well below the National Ambient Air Quality Standard (NAAQS) for PM_{10} (24-hour average) of 150 $\mu g/m^3$.

Environmental Consequences of the Proposed Action: The construction of the facilities proposed for the project area – well pads, tie-in pipelines, and access road - would result in short-term, local impacts on air quality during and after construction, due to dust being blown into the air. However, airborne particulate matter would not exceed Colorado air quality standards on an hourly or daily basis. Following successful revegetation of the sites, airborne particulate matter should return to near pre-construction levels.

Environmental Consequences of the No Action Alternative: None.

Mitigation: The proponent is responsible for abatement of dust created by construction or by project-related traffic. Potential dust abatement tools could include, among others, periodic watering as described in EnCana's 13 Point Surface Use Plan (2.K), other methods of treating road surfaces, and restriction of vehicle speed to levels that would minimize dust.

Permitting of all regulated air pollution sources through the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division, will assure compliance with all federal and state standards. The proponent will provide evidence to BLM that necessary permits have been acquired.

CULTURAL RESOURCES

Affected Environment: The access road to the well pads is the Sprague Gulch Road. That road was inventoried at the Class III (100% pedestrian) level during April 16-20 and May 2-4, 2005 along its entire length from its beginning at Piceance Creek, up to the Divide Road and along the Divide Road to its intersection with the road up Middle Stewart Gulch (Figure 2) (Conner and Davenport 2005, Compliance Dated 5/16/2005). The inventory corridor was 60 meters wide (200 feet) which included the 60 feet immediately adjacent to the north side of the road required for the gathering pipeline associated with the two well pads. No additional significant cultural resources were identified by this inventory and archaeological clearance was recommended.

The two proposed well pads were inventoried at the Class III (100% pedestrian) level on July 13, 2005 (Conner and Davenport, 2005; Compliance Dated, 7/26/2005). A 40-acre block was inventoried around the well pads. The F26 496 location would have approximately 1500 feet of new access road and pipeline associated with it. Those features were included in the inventory. The D25 496 location is located immediately next to the Sprague Gulch road and would have only about 150 feet of new access road and pipeline construction built a length that was included in the area of the pad inventory. No sites or isolated finds were identified in the inventory.

Environmental Consequences of the Proposed Action: Construction of the proposed well pads and their associated access roads and tie-in pipelines would not impact any known eligible cultural resources.

Environmental Consequences of the No Action Alternative: None

Mitigation: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days, the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places,

- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary),

- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d), the holder must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: An on-site inspection of the two well pad locations was made on July 7, 2005. An area about 600 feet (about 25 acres) around each location was inventoried for invasive and noxious plants. No infestations of noxious or invasive weed species were observed. An on-site inspection of the Divide Road to the intersection with the Middle Stewart Gulch Road was made on August 23, 2004 in association with an EA on the applicant's proposed right-of-way on the Sprague Gulch Road. An area of approximately 50 to 100 feet on either side of the existing road was inventoried for noxious weeds. The inventory included the area adjacent to the north side of the Divide Road where the gathering line for the proposed wells would be located. No large infestations of noxious or invasive weed species were observed along the road. Scattered occurrences of cheatgrass on disturbed areas alongside the road occur from Sprague Gulch to the Divide Road and along the Divide Road to the Middle Stewart Gulch Road.

Environmental Consequences of the Proposed Action: This general area of the Piceance Basin has infestations of houndstongue, musk thistle, yellow toadflax, leafy spurge, black henbane and spotted knapweed, all of which are being treated by BLM, local ranchers and others. The disturbance associated with the proposed action could create a noxious weed problem by transporting seed on vehicles and/or equipment from existing noxious weed occurrences in Sprague Gulch.

Noxious and/or invasive weed species could be transported to one or both well locations and become established on disturbed sites. Any noxious weed seed production from disturbed sites could present an invasion threat to adjacent undisturbed plant communities. The cheatgrass that is likely to establish on the disturbed sites does not pose an invasion threat to the adjacent healthy plant communities, but does pose a threat to the success of reclaiming disturbed areas.

Environmental Consequences of the No Action Alternative: None

Mitigation: The operator will clean all off-road equipment to remove seed and soil prior to commencing operations within the project area.

The operator will eliminate any noxious plants which become established before any seed production has occurred.

The operator should be required to monitor disturbed areas for establishment of any noxious weed species. Monitoring should occur until successful reclamation efforts have been achieved (also in Vegetation Section).

The operator should be required to attain sufficient vegetative cover from reclamation species within three growing seasons that is comparable to that of nearby undisturbed plant communities (also in Vegetation Section).

MIGRATORY BIRDS

Affected Environment: The mountain shrub, sage brush and aspen communities found within the project area support a large array of migratory birds that nest during the months of May, June, and July. Bird populations associated with these communities that have a high conservation interest (i.e., Rocky Mountain Bird Observatory, Partners in Flight program) are listed in the following table.

Birds of High Conservation Priority by Habitat Association

Sagebrush	Aspen	Mountain shrub
Brewer's sparrow Green-tailed towhee	Broad-tailed humming bird Red-naped sapsucker Purple martin Cordilleran flycatcher Macgillivary's warbler	Blue grouse Common poorwill

There are no specialized or narrowly endemic species known to occupy the project area.

Well sites and their associated access roads along with the pipeline gathering system would all be located on the ridge top between Story and Stewart Gulches. This area is primarily a mountain shrub habitat type with pockets of aspen located on the north slope of side draws and sagebrush parks intermingled with mountain shrub on the ridge tops. During a field visit on July 8, 2005 a blue grouse brood was observed at well site F26 496.

Environmental Consequences of the Proposed Action: Construction of well pads, their associated access roads and pipelines would remove primarily mountain shrub habitat with aspen and mountain sagebrush generally occurring adjacent to physically disturbed areas. A total of 34 acres of mountain shrub habitat would initially be removed during well pad, road, and pipeline construction. In the long term, approximately three acres located on well pads and access roads would likely remain disturbed. Construction during the migratory bird nesting season (May through July) would be disruptive and nests could be lost. Recent studies suggest that nesting density tends to be reduced (i.e., 50%) in close proximity (i.e., within 300') of roads. Typically, one pair of high-interest bird species occurs per hectare. Although the proposed actions would represent an incremental and longer term reduction in mountain shrub habitat, implementation of the proposed actions would have no measurable influence on the abundance or distribution of breeding migratory birds at any landscape scale.

The development of reserve pits in the project area may be expected to attract waterfowl and other migratory birds for purposes of resting, foraging, or as a source of free water. It has recently been brought to the White River Field Office's attention that migratory waterfowl (i.e., teal and gadwall) have contacted oil-based drilling fluids stored in reserve pits during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent and nature of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with produced water and drilling and completion fluids which may pose a problem (e.g., acute or chronic toxicity, compromised insulation).

Environmental Consequences of the No Action Alternative: None

Mitigation: The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Methods may include netting, the use of bird-balls, or other alternative methods that effectively prevent bird use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent bird use two weeks prior to beginning completion activities. The BLM-approved method will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Petroleum Engineering Technician immediately.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: The area of the proposed action includes no federally listed animal species and no habitat for such species. The special status species of concern in the project area include two Colorado BLM Sensitive Species, greater sage grouse and northern goshawk.

The two well pads and their access roads as well as the connecting pipeline route occur within the designated overall range for sage grouse on the Roan Plateau. Well D25 496 is located in serviceberry and mountain sagebrush. The brush is generally four to six feet tall diminishing its attractiveness for sage grouse, but still considered suitable sage grouse habitat. Well F26 496 is located on a north sloping side ridge ¼ mile north of the Divide Road. In this area, the flatter more suitable sage grouse habitat is located on the ridge tops which often are ⅛ mile or less in width. Suitable sage grouse habitat extends to the north on this side ridge for at least a mile. The well sites and their associated access routes were searched in the field on July 8, 2005 for evidence of sage grouse use. No sage grouse sign was noted at either location.

The nearest active sage grouse lek is located several ridges and two miles to the west of the proposed well sites at Bragg Springs. The western portion of the gathering pipeline on the Divide Road would be located within two miles of the lek. The Bragg Springs lek was occupied in 2005. An unnamed lek with a poor history of documentation is located 2½ miles to the north on Sprague Ridge. The area south of the Divide Road and adjacent to the western one mile of the pipeline gathering route is designated a sage grouse brood area. The lease for location F26 496 (COC64814) contains a No Surface Occupancy stipulation for areas within ¼ mile of identified leks and a Timing Limitation barring surface use from April 15 to July 7 within two miles of identified leks to protect grouse nesting habitat. The timing limitation would go into effect when more than 10 percent of the habitat within two miles of a lek had been affected.

Goshawks are known to utilize aspen stands for nesting, particularly when a significant amount of Douglas-fir or spruce/fir is a part of the stand. Generally, nesting would occur in larger stands of larger trees at elevations above 7,100 feet that contain significant amounts of interior forest habitat. The aspen stands occurring in the vicinity of the two well sites are small in extent, contain a high percent of dead trees and lack a conifer component. The potential for goshawk nesting is extremely limited. Raptor nest surveys discussed in the Terrestrial Wildlife section didn't locate any evidence of raptor nesting in aspen groves within ¼ mile of the well pads.

Environmental Consequences of the Proposed Action: The removal of approximately 34 acres of mountain shrub along with the associated disturbance to adjacent areas has the potential to adversely impact sage grouse and their habitat. The F26 496 well location on a narrow side ridge would also hinder sage grouse movement down the ridge to an additional 100 acres or more of suitable habitat.

Because the proposed well locations are more than two miles from a lek, neither the timing limitation nor the NSO called for by the lease would become operative. However, the western portion of the Divide Road gathering pipeline would be within two miles of the lek and implementation of the timing restriction on the pipeline's construction would reduce potential impacts on nesting sage grouse.

No impacts on goshawk are anticipated.

Environmental Consequences of the No Action Alternative: None.

Mitigation: Revegetation of the two well sites and the pipelines should encourage the establishment of mountain sagebrush along with grasses and forbs. A small amount of mountain sagebrush seed (¼ lb. /acre) is recommended in place of other shrubs in the reclamation seed mix. Mountain sagebrush seed should be collected in the vicinity and applied separately by broadcasting in the fall or on snow during the winter. Any future noxious weed control should be conducted only by hand control means to avoid treatment of sagebrush plants.

Pipeline construction along the Roan Divide road should be avoided during the sage grouse nesting period (April 15 to July 7).

Finding on the Public Land Health Standard for Threatened & Endangered species: The area currently meets the standard for northern goshawk. No suitable nesting habitat would be removed by the project and surveys have confirmed no active nest occur in adjacent aspen stands. The standard with regard to the goshawk would be met.

The project is within the overall range for sage grouse and suitable sage grouse habitat would be removed by well pad, road, and pipeline construction. Much of the habitat removed would be mitigated over time by the reclamation identified above. Throughout the Eagle/Double and Story Gulch Units, the standard with regard to the greater sage grouse is expected to be satisfied by mitigation for grouse or grouse habitat to be developed by BLM and the Colorado Division of Wildlife. Greater sage grouse mitigation developed for these units would be in addition to mitigation developed for other oil and gas development areas within the Piceance Basin.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: An on-site inspection of the two locations was made on July 7, 2005. An area about 600 feet (about 25 acres) around each location was inventoried for special status species (SSS) of plants or their suitable habitat. Green River shale barrens are the suitable habitat for the SSS plants likely to occur at the elevations encountered by the project. No SSS plants or their suitable habitats were found within the area inventoried. An on-site inspection of the Divide Road to the intersection with the Middle Stewart Road was made on August 23, 2004. An area of approximately 100 feet either side of the existing roads was inventoried for special status species (SSS) of plants or their suitable habitat. The proposed gathering pipeline for the two well pads would be located within the inventory area. No SSS plants or their suitable habitat were found within the area inventoried.

Environmental Consequences of the Proposed Action: No impact to any special status species of plants would occur from actions proposed.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

Finding on the Public Land Health Standard for Threatened & Endangered species: The project area currently meets the standard and would continue to meet the standard after implementation of the proposed action.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The operator shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: Surface Water: The proposed well pads and pipeline are located along the Divide Road which follows the drainage divide between Piceance Creek (White River Basin) and Parachute Creek (Colorado River Basin). The following catchment areas could be affected: East Fork of Stewart Gulch, West Fork of Story Gulch, and West Fork of Parachute Creek. Relevant designations by the Colorado Department of Public Health and Environment, Water Quality Control Commission (CDPHE-WQCC) are as follows: the main stem of Piceance Creek is listed in segment 15, Story Gulch is listed in segment 16, and Stewart Gulch is listed in segment 17 of the White River Basin. The West Fork of Parachute Creek is located in segment 4a of the Lower Colorado River Basin.

A review of Colorado's 1989 Nonpoint Source Assessment Report (plus updates), the 305(b) report, and 303(d) list and the Unified Watershed Assessment was conducted to see if any water quality concerns have been identified (CDPHE-WQCC, 2004a, 2004b, 2004c, 2004d). Stream segment 4a of the Colorado River Basin has been identified on the State's 303(d) list of impaired watersheds. Segment 4a is selenium impaired and allowable selenium concentrations have been modified to existing ambient levels. The State has classified segments 16 and 17 of the White River Basin as "Use Protected." The antidegredation review requirements in the Antidegredation Rule are not applicable to waters designated "Use Protected." For those waters, only the protection specified in each reach will apply. Stream segment 4a of the Lower Colorado

River Basin has not been designated "Use Protected." Thus, the Antidegredation Rule is applicable to these waters.

Stream segments 16 and 17 have been designated by the State as beneficial for the following uses: Warm Aquatic Life 2, Recreation 2, and Agriculture. Minimum standards for four parameters are listed for both segments and these parameters are: dissolved oxygen = 5.0 mg/l, pH = 6.5 – 9.0, Fecal Coliform = 2000/100 ml, and E. Coli = 630/100 ml. Stream segments 16 and 17 retained their Recreation Class 2 designation after sufficient evidence was received that a Recreation Class 1a use was unattainable.

A gaging station was operated by USGS on Piceance Creek near the confluence with Stewart Gulch. Data from that station (based on 25 years of record) indicate a seasonal variation of flow. High flows generally occurred in May and base flow conditions occurred in September through February. Sediment data collected at that station ranged from 6 milligrams per liter (mg/l) to 20,300 mg/l. During base flow conditions, the sediment levels were generally below 150 mg/l. Concentrations during high flows generally ranged from 5,000 to 7,500 mg/l. Given the ephemeral state and size of the drainages in the project area, concentrations of suspended sediment are anticipated to be less than those recorded downstream in Piceance Creek.

Ground Water: The project area is located within the Piceance Creek structural basin. Snowmelt and rain recharge the bedrock aquifers and replenish the ground water that migrates through the Uinta and Green River Formations (Tobin, 1987). Piceance Creek drainage basins' upper and lower aquifers are separated by the semi-confining Mahogany Zone. Information presented in Topper et al. (2003) indicates the following approximate depths to potentiometric surfaces within hydrogeologic units: upper Piceance basin aquifer 600 feet, lower Piceance basin aquifer 700 feet, and Mesaverde aquifer 400 feet (based on a surface elevation of 7,400 feet). Water well data from the Colorado Division of Water Resources (Topper et al., 2003) indicated that in central Rio Blanco County, water wells are not common in the basin. In the project area, the total concentration of dissolved constituents in the upper and lower aquifers is generally lower than 1000 milligrams per liter. Primary hydrogeologic units within the Piceance Basin are listed in the following table.

Summary of Hydrogeologic Units

Hydrogeologic Unit	Thickness (ft)	Approx Avg Depth (ft)	Conductivity (ft/day)	Yield (gpm)	Transmissivity (ft^2/day)
Upper Piceance Basin aquifer	0 – 1,400	700	<0.2 to >1.6	1 to 900	610 to 770
Lower Piceance Basin aquifer	0 – 1,870	2,800	<0.1 to >1.2	1 to 1,000	260 to 380
Mesaverde aquifer	Averages 3,000	7,700	NL	NL	NL
Abbreviations: ft – feet, approx – approximate, avg – average, gpm – gallons per minute, and NL – not listed.					

Table information from Topper et al. (2003).

Environmental Consequences of the Proposed Action: The primary potential water quality impact would be from additional sediment resulting from construction of the proposed drill pads, access road, and pipeline. Removal of vegetative cover results in the potential for increased soil erosion near newly disturbed areas. Runoff-producing storm events could increase sediment loads in ephemeral channels. Depending on the soils affected, salt content in the sediment may also degrade water quality.

The magnitude of these impacts is dependent on the amount of surface disturbance and climatic conditions during the time the soils are exposed to the elements. Impacts would continue until mitigation has been implemented and proven to be successful. Such mitigation would include revegetating the unused portion of the well pads as soon as possible, placing gravel on areas that would not be revegetated, or placing check dams to control runoff.

Stream segment 4a of the Colorado River Basin may be vulnerable to increased selenium levels due to elevated erosion rates. However, increased selenium concentrations are not anticipated given the relatively remote location of the proposed action in the West Fork of Parachute Creek watershed and the location of most of the disturbance on the north side of the drainage divide.

Additional water quality issues may arise if spills or leaks involving environmentally unfriendly substances are allowed to migrate off-site, contact surface water or penetrate alluvial water tables along downstream drainages. Contaminants having potential to be in direct contact with surface water would be detrimental to water quality as well as the health of riparian communities and wildlife in downstream reaches.

Ground Water: Impact on groundwater resources by drilling for natural gas is not anticipated. Shallow aquifers are protected from hydrofracturing and the production of oil and gas by installation and cementing of surface and intermediate casing. The objective of surface and intermediate casing is specifically to isolate shallow aquifers. Hydrofracturing used to stimulate natural gas production of the Mesaverde Formation is anticipated to extend a maximum of 500 feet horizontally from each well bore and not at all vertically. Any groundwater produced from the Mesaverde Formation will be hauled off and disposed of due to poor water quality thereby preventing adverse impacts on surface water.

In the event of a leak or spill of contaminants, local ground water could be at risk. Tat risk would be minimized if applicable laws and Best Management Practices are followed.

Environmental Consequences of the No Action Alternative: None.

Mitigation: Oil and gas development activities require a stormwater discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division, for construction associated with well pads, pipelines, roads and other facilities. As a condition of the permit, a Stormwater Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport. The applicant is required to have a copy of the SWMP on file with the Meeker Field Office and to implement the BMPs in that plan as on-site conditions warrant.

The White River Record of Decision and Approved Resource Management Plan (July, 1997) includes a list of standard Conditions of Approval to be applied to All Surface Disturbing Activities (COAs 1-12) and to Road Construction and Maintenance (COAs 13-62). The applicant is required to be familiar with those standard COAs and to implement them as on-site conditions warrant.

The operator will be responsible for complying with all local, state, and federal water quality regulations as well as provide documentation to the BLM that they have done so.

Finding on the Public Land Health Standard for water quality: Water quality in the affected stream segments currently meets water quality standards set by the State. By following proper mitigation measures outlined above, water quality will not be changed from present conditions.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No flood plains, riparian or wetland systems, prime and unique farmlands, wild and scenic rivers, Areas of Critical Environmental Concern or wilderness exist within the project area. The Public Land Health Standards for wetland or riparian systems are not applicable to this action, since neither the proposed action nor the no-action alternative would have any influence on these. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: Soils data for the area are from an order III soil survey prepared by the Natural Resource Conservation Service for Garfield County (NRCS 2003). A complete summary of this information can be found at the White River Field Office. Only one soil mapping unit would potentially be affected by the proposed action, the Parachute-Rhone loam. Its characteristics are described in the table below.

Garfield County Soils Affected by the Proposed Action

Soil Number	Soil Name	Slope	Ecological site	Salinity (mmhos/cm)	Run Off	Erosion Potential	Bedrock
53	Parachute-Rhone loams	5-30%	Mountain Loam	<2	Medium	Moderate	29

Environmental Consequences of the Proposed Action: Construction of the proposed pipeline alignment, the well pad locations and the access road and pipeline to the F26 496 well pad would create new soil disturbance. At these locations, vegetative surface cover would be removed and the soil disturbed, thus potentially increasing soil erosion and reducing soil health and productivity. The calculated 34.1 acres of disturbance would all occur within soil 53 (Parachute-Rhone loam).

Disturbance of soils on steeper slopes on the pipeline route would increase the importance of proper application of mitigation measures described in the Storm Water Management Plan (SWMP) and the standard COAs (See Water Quality Section).

Environmental Consequences of the No Action Alternative: The proposed action would not occur. No new surface disturbance would occur and erosion rates would be subdued.

Mitigation: Segregation of topsoil material and replacement of top soil in its respective original position (last out, first in) will assist in the reestablishment of soil health and productivity.

Finding on the Public Land Health Standard for upland soils: Soils within the project area meet the criteria established in the standard for upland soils. Following proper mitigation, soil health will not be adversely impacted by the proposed actions.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Both proposed well pad locations occur within a Mountain Loam Ecological Site. The appearance of both locations is a shrubland dominated by mountain big sagebrush with scattered thickets of serviceberry. Both locations have a composition of native plants that are an upper seral plant community. The following table shows the estimated vegetative cover at each location:

Plant Species Composition and Cover at each Well Pad

Species/% Cover	Well Pad D 25 496	Well Pad F26 496
Mountain Sagebrush	15-20 %	15-20 %
Serviceberry	10-20 %	5-20 %
Bitterbrush	> 5 %	5-10 %
Gambel's Oakbrush	> 5 %	---
Native grasses	15-20 %	25-30 %
Native forbs	15-20 %	15-20 %
Bare ground	5-10 %	5-10 %

A mountain sagebrush community with serviceberry scattered throughout characterizes the vegetation along the Divide Road where the gathering line would be located.

Environmental Consequences of the Proposed Action: The actions proposed would remove all vegetation from the disturbed areas. About 3.5 acres of the disturbance would occur at location D25 496 from construction of the well pad (3.1 acres). This location is next to the main access road and would require only a short access road (0.4 acres disturbance). About 6.7 acres of the disturbance would occur at location F26 496 -- 3.3 acres from pad construction and 3.4 acres from road and pipeline construction. Construction of the gathering pipeline along the Divide Road would result in about 24 acres of disturbance.

The total disturbance associated with construction of the well pads would be short-term as the pads remain non-vegetated for only the drilling phase. A portion of the well pad would be reclaimed following the drilling phase, leaving only the production area of the well pad and the road travel surface non-vegetated. As much as 75 percent of the original disturbance could be returned to production of desirable vegetation within three to five years. The remaining disturbance could remain non-vegetated for a considerable length of time depending upon the success and life expectancy of the wells at each location.

The disturbance associated with construction of the gathering pipeline would be short term and, with successful reclamation, could be returned to production of desirable vegetation within three to five years.

Disturbances associated with the proposal would be subject to an invasion of very competitive weedy plants, some native, some not. Invasion of these weedy species could create problems for reclamation efforts. It usually takes a couple of growing seasons for these species to develop sufficient seed for dominance of the disturbance. The longer the disturbance remains non-vegetated, the greater the chance for invasion by these weedy plants. Once the disturbance becomes dominated by weedy species, reclamation with desirable native perennial species becomes very difficult. What should be a short-term impact could become a long-term invasion of weedy species that usually requires additional resources and strategies to control the unwanted vegetation before successful reclamation can be achieved.

The greatest long-term impact on vegetation would be the loss of the native shrub component of the plant communities impacted. The mountain sagebrush would likely begin to return to reclaimed areas within 10 years; current cover levels would be regained within 20 to 25 years. However, serviceberry and bitterbrush are not likely to return to the reclaimed areas for at least 50 years. Attempts in the past to re-establish these shrub species have had only marginal success.

Environmental Consequences of the No Action Alternative: None.

Mitigation: Areas of the two well pads not used during any production phase, including cut and fill slopes, will be contoured to a slope of about 5:1, and will have topsoil redistributed and re-vegetated with the native seed mix noted below prior to the first full growing season following completion of drilling.

Native Seed Mix

Species	Pure Live Seed*
Basin Wildrye (Magnar)	2 lbs/ac
Western wheatgrass (Rosanna)	2 lbs/ac
Slender wheatgrass (Primar)	2 lbs/ac
Mountain brome (Bromar)	2 lbs/ac
Big bluegrass (Sherman)	1 lbs/ac
Antelope bitterbrush	1 lbs/ac
Rocky Mountain penstemon	1 lbs/ac
** Seeding rate for drill seeding. Double rate for broadcast/harrow seeding*	

Final reclamation of roads and well pads following abandonment will be achieved with the native seed mix noted above. Successful re-vegetation should be achieved within three years following final reclamation.

The operator is required to monitor the reclaimed sites for a minimum of three years post-construction to detect the presence of noxious/invasive species. Any such species that occur will be eradicated.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The project area currently meets the standard and would continue to meet the standard after implementation of the proposed action.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: There is no aquatic wildlife within the project area.

Environmental Consequences of the Proposed Action: None.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): As there is no aquatic wildlife within the project area, the standard is not applicable.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The project area is located near the Roan Plateau Divide between Story Gulch and Stewart Gulch. At an elevation of 7800 feet, the area is primarily a mountain shrub habitat with small stands of aspen in some draws and areas of mountain sagebrush interspersed with mountain shrub on the ridge tops. Side hills are primarily mountain shrub.

There are no cliffs or significant rock outcrops located in the vicinity of the project area. The only raptor nesting habitat in the area consists of aspen stands located in the side draws and canyon bottoms. On the north side and immediately adjacent to well pad D25 496 is a mature aspen stand 10 to 15 acres in size. There is a high level of tree mortality in this grove resulting in a very open stand of aspen trees. This grove was searched for evidence of raptor nesting on July 8, 2005. No evidence of raptor nests or nesting was noted. Within ¼ mile of well site F26 496, only one small grove of aspen was noted. This grove is located in a small side draw east of the well location. There is also a high level of tree mortality in this stand. Dead trees and the six or so remaining live trees were searched and no evidence of raptor nesting was noted. The main road access route to these well sites was analyzed in the Sprague Gulch Road EA (CO-110-2005-

161-EA, July 26, 2005). Inventories and analysis for the road identified three separate raptor nests in close proximity to the road.

The two well locations and pipeline gathering system all occur on deer and elk summer range. The well locations provide excellent cover and foraging habitat for both species. Tracks and droppings on the areas indicate light to moderate foraging by both deer and elk. The lease for the D25 496 location (COC61136) contains a Timing Limitation barring surface use from May 15 to August 15 for the protection of deer and elk summer range. The stipulation is to take effect when direct and indirect impacts on suitable summer range in Game Management Unit 22 exceeds 10 percent of the total.

Environmental Consequences of the Proposed Action: The construction of two well pads and their associated access roads and pipelines would remove 34 acres of elk and deer foraging habitat and disrupt use of adjacent habitat. This amount would not in itself or in combination with other impacts in the area result in a total impact amounting to more that 10 percent of the suitable summer range in GMU 22. Thus, the timing limitation indicated in oil and gas lease COC61136 would not be implemented.

No raptor nest sites would be disturbed by development of the two well sites and gathering pipeline. Increased use of the main access road system during the raptor nesting season has a high probability of disrupting nesting activity at three nest sites, as described in the Sprague Gulch EA.

Environmental Consequences of the No Action Alternative: No additional disturbance of big game associated with commercial oil and gas development, or net loss of habitat to elk and deer summer range would occur at this time and place. Although current use of the road corridor would continue, the more intense traffic associated with well drilling would not increase the potential to disturb raptor nesting at three sites.

Mitigation: Use of the Sprague Gulch Road for traffic related to major development activities such as well drilling and pipeline construction would be limited during the raptor nesting season (February 1 to August 15) or until surveys during the nesting season in the year of development confirm no active raptor nesting within a ¼ mile of the access road.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): This project would not jeopardize the viability of any animal population. It would have no significant consequence on terrestrial habitat condition, utility, or function, nor have any discernible effect on animal abundance or distribution at any landscape scale. The public land health standard would thus be met.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those checked in the last column will be addressed further in this EA.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation			X
Cadastral Survey	X		
Fire Management	X		
Forest Management	X		
Geology and Minerals			X
Hydrology/Water Rights	X		
Law Enforcement		X	
Noise			X
Paleontology			X
Rangeland Management			X
Realty Authorizations			X
Recreation			X
Socio-Economics			X
Visual Resources			X
Wild Horses	X		

ACCESS AND TRANSPORTATION

Affected Environment: Access to the two proposed well locations is from Rio Blanco County Road 5 at Piceance Creek along the Sprague Gulch Road. The applicant was recently granted a right-of-way for use of the road (COC-67996) and has made substantial improvements, anticipating its use as the primary access route to the Story Gulch Unit and to the North Parachute Ranch (Figure 2). At the time of this EA preparation, the improvements described in the right-of-way grant have been implemented except for the hardening of the low-water crossing at Piceance Creek and installation of the corrugated metal pipe (CMP) at the switchback. The reroute has been constructed and the road has been generally improved.

The Sprague Gulch Road is public access to over 10,000 acres of public lands in Townships 3 and 4 South, Ranges 96 and 95 West. It also provides public access across private lands up to the Divide Road on a term-limited easement. The proposed well locations and gathering line would be constructed along the private-surface portion of this road. Leaving the public access route where it crosses private land is not permitted by the landowners.

Traffic is low most of the year, peaking during hunting season.

Environmental Consequences of the Proposed Action: The impacts of improving the Sprague Gulch Road and using it for access by oil and gas development traffic were treated in CO-110-2005-161 EA (July 26, 2005). Among other things, that EA concluded that traffic up the road would increase as well drilling equipment, pipeline construction equipment and gas production traffic would travel along the road throughout the day and that year-round maintenance would open the road up to winter travel.

Due to the potential impacts of regular oil and gas development traffic across Piceance Creek as the number of wells increased, BLM stipulated in the right-of-way grant that after 20 well pads had been constructed in the area accessed by the Sprague Gulch Road, no further use of the road for natural gas development would be permitted until a bridge had been constructed across Piceance Creek. The two well locations discussed in this EA make up the second and third of those 20 well pads.

The construction of the 1500 foot access road to the F26 496 location would not increase traffic along the ridge to the north as two-track road is already in place to the north. Additionally, public access off the Divide Road at that point is not permitted. Public traffic along the Sprague Gulch and Divide Roads could be blocked or impeded by construction activities unless the applicant were to provide access around the construction and assure that any traffic delays would be brief.

Environmental Consequences of the No Action Alternative: None.

Mitigation: Implement road construction and maintenance standards and procedures described in the APD's 13 Point Surface Use Plan.

The applicant is required to assure that public traffic on the Sprague Gulch and Divide Roads is not obstructed by construction of the project. Traffic delays for movement of construction equipment would be brief.

GEOLOGY AND MINERALS

Affected Environment: The surficial geology in the project area is the shallow dipping Tertiary Uinta Formation within the Green River Formation (Tweto, 1979). The Green River Formation is comprised of organic-rich shaley limestone, shale, marlstone, and sandstone, and is rich in fish, insect and plant fossils. The Green River Formation contains very substantial amounts of "oil shale" which is actually a kerogen-rich marlstone (Foutz, 1994). Other mineral resources in the project area include gas, coal, and nahcolite. EnCana's targeted zone in all the wells is in the Mesaverde. During drilling, potential water, oil shale, coal, oil and gas zones would be encountered from the surface to the targeted zone. This area is identified in the ROD/RMP as available for underground oil shale leasing and development.

Environmental Consequences of the Proposed Action: The cementing procedure of the proposed actions isolates the formations and, if properly done, would prevent the migration of gas, water, and oil between formations. The coal zones located in the Mesaverde would also be isolated during this procedure. These zones are at a depth greater than 3,000 feet and the coal is not recoverable by conventional methods. Development of these wells would deplete the hydrocarbon resources in the targeted formation. Depending on the number of additional wells, future development of underground mining of the oil shale in and around existing wells may be limited.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

NOISE

Affected Environment: Traffic on the Sprague Gulch and Divide Roads is generally the only source of man-made noise in the project area. Those people potentially subject to noise generated in the project area are ranchers, recreationists, especially during hunting season, and increasingly employees of the oil and gas companies.

Environmental Consequences of the Proposed Action: Well pad construction and well drilling would generate noise for two to four months at each site. The Colorado Oil and Gas Commission (COGCC) have established a noise limit of 55 decibels (dBA) as the limit for oil and gas facilities in residential areas. (This can be compared to average highway noise of 60 dBA at 100 feet.) The 55 dBA limit would be reached at 1,500 feet from a well pad construction site and at 800 feet from and operating drill rig, although the rig would be operating 24 hours a day for the period of drilling. Local wind and terrain effects could cause that distance to vary considerably in different parts of the project area and at different times.

Environmental Consequences of the No Action Alternative: None

Mitigation: None.

PALEONTOLOGY

Affected Environment: The proposed well pads and associated road and pipeline construction all are located in an area mapped as the Uinta Formation (Tweto 1979). BLM has classified the Uinta as a Condition I formation, meaning that it is a known producer of scientifically significant fossils.

Environmental Consequences of the Proposed Action: Since the actions proposed in the project area would all occur within the Uinta formation, there is potential for impacting fossil resources if it is necessary to excavate into the underlying rock formation to construct the well pads, including the reserve/blooie pit, to construct or upgrade the access roads, or to install the pipelines.

Environmental Consequences of the No Action Alternative: None

Mitigation: 1. All exposed rock outcrops in the project area shall be examined by an approved paleontologist with a report detailing the results of the inventory and any mitigation recommendation shall be submitted to the BLM prior to the initiation of construction on any of the well pads or associated roads and pipelines. A monitor shall be present at any time that it becomes necessary to excavate into the underlying rock formation in order to bury pipelines, level well pads or excavate reserve/blooie pits, or to construct any project features.

2. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

RANGELAND MANAGEMENT

Affected Environment: Both well pad locations and the proposed gathering pipeline are on private surface owned by EnCana. No BLM grazing permit area is involved with the proposal. Grazing use of the area is handled by private agreement between parties. In the past, the Piceance Creek Ranch has grazed this area with cattle in summer and early fall.

No range improvements or livestock handling facilities are located near the two locations.

Environmental Consequences of the Proposed Action: Minimal forage loss for livestock is expected from this action. Perhaps 15 AUMs of forage would be lost in the short term. If reclamation efforts of the unused areas of the well pads and the proposed gathering pipeline are successful, a small increase in forage available to livestock could occur. Final reclamation of the two locations would result in a small increase in forage for livestock above current levels.

Environmental Consequences of the No Action Alternative: None

Mitigation: None.

REALTY AUTHORIZATIONS

Affected Environment: The two proposed well pads, new access road and pipelines would be authorized as part of the development of the Story Gulch Unit.

Environmental Consequences of the Proposed Action: The development of the Story Gulch Unit will cause an increase in the traffic load that will be using the Sprague Gulch access road and the Piceance Creek low water crossing

Environmental Consequences of the No Action Alternative: None.

Mitigation: The road improvements for the Sprague Gulch right-of-way must be installed prior to development of the well pads for the Story Gulch Unit – that is the low-water crossing at Piceance Creek must be hardened before they bring any heavy equipment through it.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

RECREATION

Affected Environment: The proposed action would occur on private surface owned by the applicant. As private land, it is not part of the White River Extensive Recreation Management Area (ERMA) where BLM provides custodial management of recreation. Although the Sprague Gulch and Divide Roads provide public access across private lands on a term-limited easement, leaving the road on to private land is not permitted. Recreation activities that do take place in the project area are undertaken by the owners and their guests. Hunting is the primary activity.

Environmental Consequences of the Proposed Action: Because the area on which the proposed action would take place is privately owned, no public recreation activities on those lands would be affected. Public land recreation in other areas that are accessed by the Sprague Gulch and Divide Road easement would not be affected by the proposed action because traffic along the road would not be impeded by the construction or drilling activities.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

SOCIOECONOMICS

Affected Environment: The proposed actions within the project area would be developed in Rio Blanco County but construction and drilling resources would also be drawn from Garfield County and Mesa County. Rio Blanco County had an estimated 2003 population of 6,033, almost unchanged from the 1990 level of 6,051. The major communities in the county are Meeker (2,263 population in 2003) and Rangely (2,088). The county underwent a substantial economic and demographic growth in the late 1970's and early 1980's when major energy companies attempted to develop oil shale as a national energy fuel source. After a decline in jobs and population from the boom levels, the number of jobs and people in the county has remained static. Currently, the government sector makes up almost a third of all jobs in the

county. The traditional farming and ranching sector has been supplemented in the last few years by a growing number of jobs in the oil and gas extraction industry as drilling activity has expanded. Many of the resources for development of the oil and gas resource come out of Garfield County or Mesa County and locate in Rio Blanco County on only a temporary basis.

Within the project area, livestock grazing is the only other economic activity that currently takes place other than natural gas exploration and development.

Environmental Consequences of the Proposed Action: The employment required for construction of the facilities in the Story Gulch Unit project area would most likely not be new employment but workers already available in the area. Some may very well reside in other western Colorado counties. Motels, restaurants, grocery stores, gas stations, vehicle and equipment repair shops could all experience some additional activity. The facilities developed by the proposed actions would expand the local property tax base and the gas produced by the proposed wells would generate increased federal royalties. Half of those royalties would be returned to the State of Colorado and to jurisdictions within Colorado, including Rio Blanco County. This net effect of these impacts would be considered beneficial but low.

Environmental Consequences of the No Action Alternative: None.

Mitigation: None.

VISUAL RESOURCES

Affected Environment: The lands on which the proposed action would occur are privately owned and as such have not received a BLM Visual Resource Management (VRM) designation. Had they been classified, they would have probably received a VRM Class III designation. The management goal for this class is to partially retain the existing character of the landscape. The change brought about by activities on lands with VRM III designation may be evident. The visual contrast may be moderate but should not dominate the natural landscape character. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Visual sensitivity in the area is low because use is low and because no special management areas or other uses rely on the area's visual quality. Distance and intervening terrain shield the area from the most highly traveled route in the area, the Piceance Creek Road (CR 5). Local ranchers, a growing number of oil and gas company employees and contractors, and a few recreationists, especially during hunting season, make up the potential viewing public.

Environmental Consequences of the Proposed Action: The proposed well pads, with their associated access roads and pipelines, would alter the landscape character. Removal of vegetation and recontouring of the natural surface during construction would introduce linear features into the landscape and offer contrasting soil and vegetation colors and patterns that had not previously been there. This change would lessen in the long-term as exposed areas were reclaimed and bare soil was not so extensively evident. Additionally, above-ground natural gas

production facilities such as well heads, metering sheds, condensate tanks, and compressor facilities would introduce man-made industrial facilities that would draw attention due to their size, color and shape. The use of natural paint tones would reduce the visual impact of the facilities.

The proposed D25 496 location is located at the intersection of the Sprague Gulch and Divide Roads and would tend to dominate the immediate foreground view of those traveling on the roads. The F26 496 well pad is set back about 1500 feet from the Divide Road and screened by intervening vegetation and would not dominate the foreground view. Viewed from the middle-background, the changes in the overall landscape of the project area would appear to be moderate and would not dominate the natural character of the landscape. The character of the landscape would be partially retained, meeting the standards of the VRM III classification.

Environmental Consequences of the No Action Alternative: None

Mitigation: All permanent (onsite for six [6] months or longer) structures, facilities and equipment placed onsite shall be low profile and painted Munsell Soil Color Chart Juniper Green or equivalent within six months of installation.

Disturbed areas on well pads not needed for production equipment shall be restored as nearly as possible to their original contours and seeded. Cut and fill slopes shall be stabilized with vegetation, matting or equivalent measures to prevent erosion and reduce the color contrast. (See required reclamation measures in the Vegetation Section.)

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts from oil and gas development were analyzed in the White River Resource Area PRMP/FEIS. Current development, including the actions proposed in the Story Gulch project area, has not exceeded the foreseeable development analyzed in the PRMP/FEIS.

REFERENCES CITED

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CDPHE-WQCC, 2004b. "Status of Water Quality in Colorado – 2004, The Update to the 2002 305(b) Report," April.

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USDI Bureau of Land Management, Colorado. 1997. White River Record of Decision and Approved Resource Management Plan (ROD/RMP). Meeker, Colorado.

PERSONS / AGENCIES CONSULTED: None

INTERDISCIPLINARY REVIEW:

Project Team		
Name	**Title**	**Area of Responsibility**
BLM Oversight		
Keith Whitaker	Natural Resource Specialist	Project Lead; Visual Resource Management
Paul Daggett	Mining Engineer	Geology and Minerals
Brett Smithers	Wildlife Biologist	Migratory Birds; Threatened, Endangered and Sensitive Animal Species; Wildlife; Wetlands and Riparian Zones
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern; Threatened and Endangered Plant Species
Chris Ham	Outdoor Recreation Planner	Recreation; Wilderness; Access and Transportation
Mark Hafkenschiel	Rangeland Management Specialist	Vegetation; Invasive, Non-Native Species; Rangeland Management
Michael Selle	Archeologist	Cultural and Paleontological Resources
Nate Dieterich	Hydrologist	Air Quality; Water Quality, Surface and Ground; Hydrology and Water Rights; and Soils
Penny Brown	Realty Specialist	Realty Authorizations
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Marvin Hendricks	Petroleum Engineer	Wastes, Hazardous or Solid
WestWater Engineering (Third Party Contractor)		
Dan McWilliams	Senior Engineer	Air Quality; Water Quality, Surface and Ground; Hydrology and Water Rights; Geology and Minerals; and Soils
Steve Moore	Environmental Scientist	Areas of Critical Environmental Concern; Cultural Resources; Paleontological Resources; Wastes, Hazardous or Solid; Access and Transportation; Wilderness; Realty Authorizations; Recreation; and Visual Resources
Rusty Roberts	Range Conservationist	Threatened and Endangered Plant Species; Invasive, Non-Native Species; Wetlands and Riparian Zones; Vegetation; Fire Management; Rangeland Management; and Wild Horses
Doug McVean	Wildlife Biologist	Migratory Birds; Threatened, Endangered and Sensitive Animal Species; Wildlife, Terrestrial and Aquatic
Mike Klish	Environmental Scientist	Forest Management

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2004-217-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment, analyzing the environmental effects of the proposed actions, has been reviewed. The approved mitigation measures (attached to the APDs as Conditions of Approval) for the proposed actions – wells 8506B F26 496 and 8505D F26 496 and two additional wells at location D25 496 in the Story Gulch Unit, associated access roads and tie-in pipelines, and a gathering pipeline along the Divide Road - result in a finding of no significant impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the above proposed actions.

WestWater Engineering, an environmental consulting firm, with the guidance, participation, and independent evaluation of the Bureau of Land Management (BLM) prepared this document. The BLM, in accordance with 40 CFR 1506.5 (a) and (c), is in agreement with the findings of the analysis and approves and takes responsibility for the scope and content of this document.

DECISION/RATIONALE: It is my decision to approve the development of wells 8506B F26 496 and 8505D F26 496 and two additional wells at location D25 496 in the Story Gulch Unit, the associated access roads and tie-in pipelines, and a gathering pipeline along the Divide Road with the mitigation listed below. The proposed actions are in concert with the objectives of the White River ROD/RMP in that they would allow development of federal oil and gas resources in a manner that provides reasonable protection for other resource values. Protection for other resource values will be assured by implementation of the mitigation measures described below and attached to the APDs as Conditions of Approval.

MITIGATION MEASURES: 1. The proponent is responsible for abatement of dust created by construction or by project-related traffic. Potential dust abatement tools could include, among others, periodic watering as described in EnCana's 13 Point Surface Use Plan (2.K), other methods of treating road surfaces, and restriction of vehicle speed to levels that would minimize dust.

2. Permitting of all regulated air pollution sources through the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division, will assure compliance with all federal and state standards. The proponent will provide evidence to BLM that necessary permits have been acquired.

3. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are

uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the Authorized Officer (AO). Within five working days, the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places,
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary),
- a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

4. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d), the holder must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

5. Eliminate any noxious or invasive plants before any seed production has occurred. Eradication should make use of materials and methods (Pesticide Use Proposal) approved in advance by the AO. Application of herbicides must be under field supervision of an EPA-certified pesticide applicator.

6. The operator will clean all off-road equipment to remove seed and soil prior to commencing operations on public lands within the project area.

7. The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Methods may include netting, the use of bird-balls, or other alternative methods that effectively prevent bird use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent bird use two weeks prior to beginning completion activities. The BLM-approved method will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Petroleum Engineering Technician immediately.

8. Revegetation of the two well sites and the pipeline should encourage the establishment of mountain sagebrush along with grasses and forbs. A small amount of mountain sagebrush seed (¼ lb./acre) is recommended in place of other shrubs in the reclamation seed mix. Mountain

sagebrush seed should be collected in the vicinity and applied separately by broadcasting in the fall or on snow during the winter. Any future noxious weed control should be conducted only by hand control means to avoid treatment of sagebrush plants.

9. Pipeline construction along the Roan Divide road should be avoided during the sage grouse nesting period (April 15 to July 7).

10. The operator is required to collect and properly dispose of any solid wastes generated by the proposed actions.

11. Oil and gas development activities require a stormwater discharge permit from the Colorado Department of Public Health and Environment, Water Quality Control Division, for construction associated with well pads, pipelines, roads and other facilities. As a condition of the permit, a Stormwater Management Plan (SWMP) would be developed showing how Best Management Practices (BMPs) are to be used to control runoff and sediment transport. The applicant is required to have a copy of the SWMP on file with the Meeker Field Office and to implement the BMPs in that plan as on-site conditions warrant.

12. The White River Record of Decision and Approved Resource Management Plan (July, 1997) includes a list of standard Conditions of Approval to be applied to All Surface Disturbing Activities (COAs 1-12) and to Road Construction and Maintenance (COAs 13-62). The applicant is required to be familiar with those standard COAs and to implement them as on-site conditions warrant.

13. Segregation of topsoil material and replacement of top soil in its respective original position (last out, first in) will assist in the reestablishment of soil health and productivity.

14. All disturbed areas for the well pads, associated roads and the pipeline, with the exception of the production area of the well pads and the road travel surface, will be reclaimed within the first growing season or prior to the first full growing season following disturbance with the following seed mix:

Native Seed Mix

Species*	**Pure Live Seed****
Basin Wildrye (Magnar)	2 lbs/ac
Western wheatgrass (Rosanna)	2 lbs/ac
Slender wheatgrass (Primar)	2 lbs/ac
Mountain brome (Bromar)	2 lbs/ac
Big bluegrass (Sherman)	1 lbs/ac
Antelope bitterbrush	1 lbs/ac
Rocky Mountain penstemon	1 lbs/ac
**See COA #8.*	
*** Seeding rate for drill seeding. Double rate for broadcast/harrow seeding.*	

Successful re-vegetation should be achieved within three years. The operator will be required to monitor the project site(s) for a minimum of three years after construction to detect the presence

of noxious/invasive species. Any such species that occur will be eradicated using materials and methods approved in advance by the Authorized Officer.

Areas of the well pads not used during any production phase, including cut and fill slopes, will be contoured to a slope of about 5:1, and will have topsoil redistributed and re-vegetated with the above seed mix prior to the first full growing season following completion of drilling.

Final reclamation of roads and well pads following abandonment will be achieved with the native seed mix noted above.

15. Use of the Sprague Gulch Road for traffic related to major development activities such as well drilling and pipeline construction will be limited during the raptor nesting season (February 1 to August 15) or until surveys during the nesting season in the year of development confirm no active raptor nesting within a ¼ mile of the access road.

16. Implement road construction and maintenance standards and procedures described in the APD's 13 Point Surface Use Plan.

17. The applicant is required to take measures to assure that public traffic on the Sprague Gulch and Divide Roads is not obstructed by construction of the project. Traffic delays for movement of construction equipment will be brief.

18. All exposed rock outcrops in the project area shall be examined by an approved paleontologist with a report detailing the results of the inventory and any mitigation recommendation shall be submitted to the BLM prior to the initiation of construction on any of the well pads, compressor site or road/pipeline right-of-way. A paleontology monitor shall be present at any time that it becomes necessary to excavate into the underlying bedrock formation in order to bury the pipeline, level the well pad, excavate the reserve/blooie pit or to construct any project features.

19. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has

been completed, the operator will then be allowed to resume construction.

20. All permanent (onsite for six [6] months or longer) structures, facilities and equipment placed onsite shall be low profile and painted Munsell Soil Color Chart Juniper Green or equivalent within six months of installation.

NAME OF PREPARER: WestWater Engineering
2516 Foresight Circle #1
Grand Junction, CO 81505
Telephone: (970) 241-7076

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL: Marvin Henricks for Kent Walter
Field Manager

DATE SIGNED: October 20, 2005

ATTACHMENTS: Figure 1-Location Map of the Proposed Action
Figure 2-Map of the Story Gulch Well Pads Project Area

BLM White River Resource Area

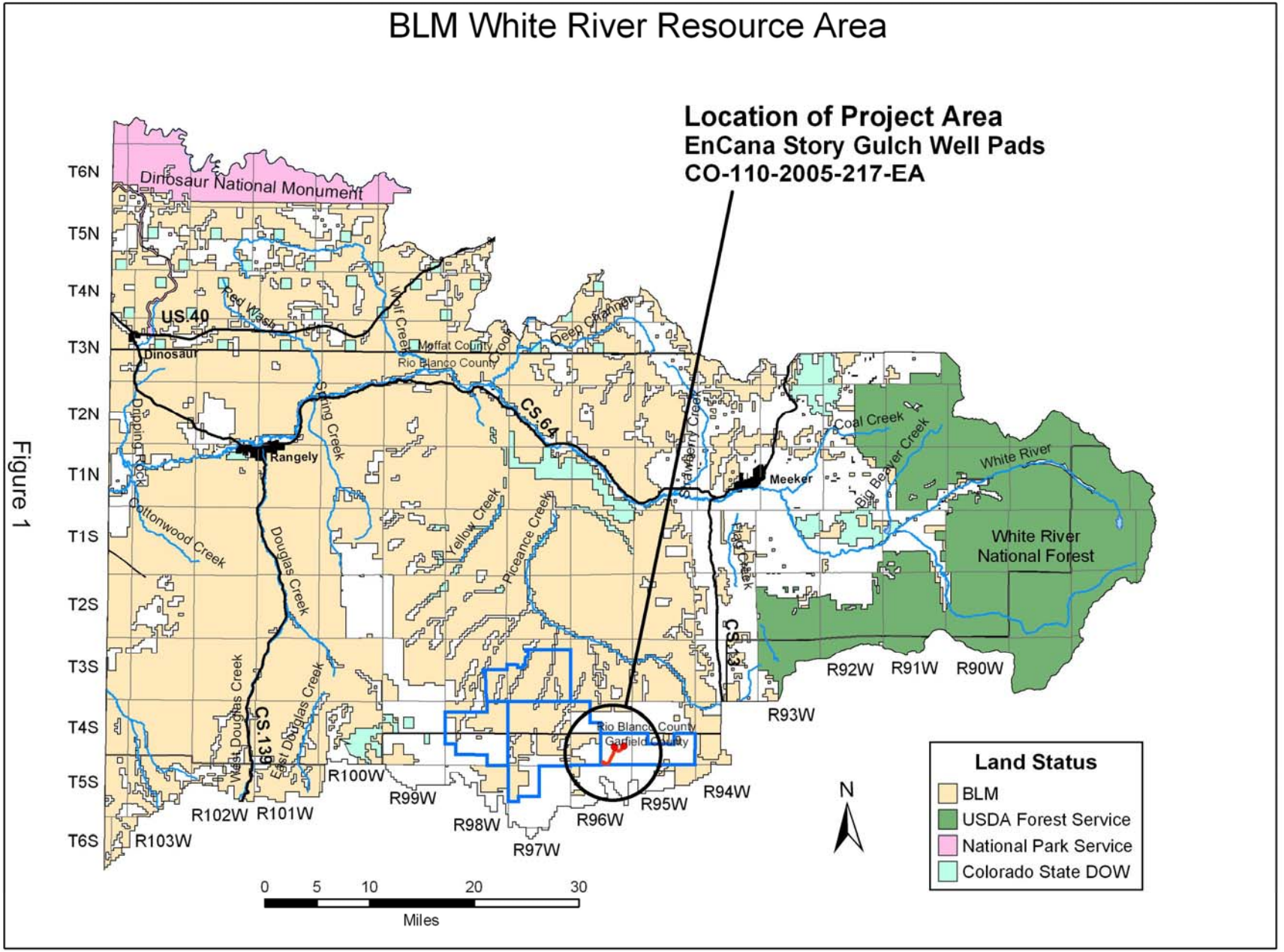
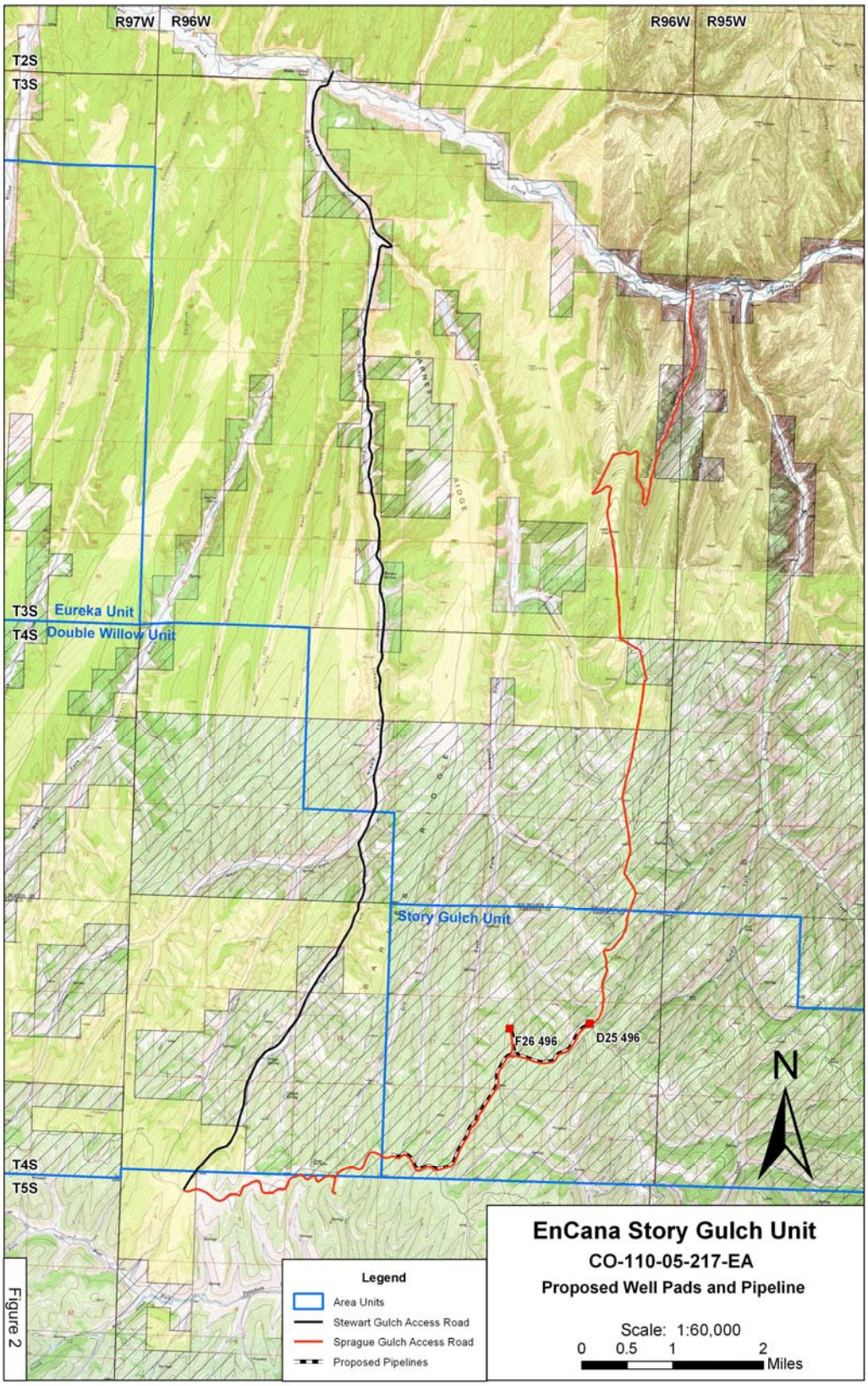


Figure 1


R97W
R96W
R96W
R95W
T2S
T3S
T3S
T4S
T4S
T5S
Eureka Unit
Double Willow Unit
Story Gulch Unit
F26 496
D25 496
N
EnCana Story Gulch Unit
CO-110-05-217-EA
Proposed Well Pads and Pipeline
Scale: 1:60,000
0 0.5 1 2
Miles
Legend
Area Units
Stewart Gulch Access Road
Sprague Gulch Access Road
Proposed Pipelines
Figure 2